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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,422	03/10/2004	John Frederick Ackerman	122802-3	4370

49305 7590 06/01/2005

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EXAMINER	
TUROCY, DAVID P	
ART UNIT	**PAPER NUMBER**
1762	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/797,422	Applicant(s) ACKERMAN ET AL.	
	Examiner David Turocy	Art Unit 1762	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 19 May 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: *17-31*.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Detailed Action.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The proposed amendments, filed 5/19/2005, have been reviewed by the examiner. The examiner notes the amendments to independent claim 17 to include "porous" before each recitation of the outer layer. Since these limitations were already addressed in the previous office action, no new issues that require further search and/or consideration exist and therefore the amendment has been entered by the examiner.

Response to Arguments

2. Applicant's arguments filed 5/19/2005 have been fully considered but they are not persuasive.

The applicant has argued against the Spence et al reference stating that is does not teach infiltrating the outer layer, but rather teaches coating the substrate. The examiner respectfully disagrees, infiltrating, is defined by Webster's online dictionary as "to cause to permeate something" and impregnating is defined as "to cause to be permeated". Therefore, it is the examiners position that infiltrating is synonymous with impregnating and the art does no recognize any distinction between coating and impregnating. *In re Marra et al.*, 141 USPQ 221.

The applicant has argued that there is no motivation to combine Spence et al. and Hasz et al. The applicant has argued that the contaminants addressed by Spence et al, carbon deposits, are not similar to the contaminants addressed by Hasz, CMAS deposits, and one skilled in the art would not consider the teaches of Hasz et al relevant

to Spence et al. Hasz et al is utilized here to show that thermal barrier coatings comprising an alumina barrier layer and a bond coating are susceptible to various modes of damage from containments. Hasz discloses the contaminants as materials that are in the engine, which deposit on the surface of the engine part, from air and fuel sources, and impurities to oxidation products and only uses CMAS as an exemplary showing (Paragraph 2, lines 20-21 and 32-35). The examiner agrees Spence et al. is directed to carbon deposits, more particularly, carbon deposits on fuel contacting surfaces located in high temperature zones of gas turbine engines, where the carbon deposits are a side effect of the fuels being consumed within the engine (Column 1, lines 11-25). Therefore it is the examiners position that the Spence et al and Hasz et al are relevant art because they both teach of protecting turbine engine parts from contaminants. Spence teaches applying an n alumina/silicon coating protects various substrates, including ceramic, from contaminants and Hasz teaches thermal barrier coatings, with outer layers of ceramic, benefit from a contaminant protective coating.

The applicant has argued against the Hasz et al reference stating that is does not teach infiltrating the outer layer, but rather teaches coating the substrate. The examiner respectfully disagrees, infiltrating, is defined by Webster's online dictionary as "to cause to permeate something" and impregnating is defined as "to cause to be permeated". Therefore, it is the examiners position that infiltrating is synonymous with impregnating and the art does no recognize any distinction between coating and impregnating. *In re Marra et al.*, 141 USPQ 221.

The applicant has argued against the Hasz et al reference stating that it forms an impermeable barrier coating on the thermal barrier coating (TBC) and does not teach or suggest infiltration of the porous outer layer. While the examiner agrees the coating, as taught by Hasz, discloses forming an impermeable coating, Hasz et al also discloses this impermeable coating protects the TBC from infiltration of contaminants. Therefore, in order to be subsequent to infiltration, the TBC, as taught by Hasz, must necessarily have some amount of porosity. Therefore as discussed by the applicant, since the coating compositing is applied to a porous material, the "coating" composition would inherently impregnate, i.e. infiltrate. *See Remark, Page 7, Paragraph 2.* Therefore the examiner maintains the above reliance on *In re Marra*.

The applicant has argued against the Ceramic and Glasses reference stating that is does not teach forming finely divided alpha alumina. However, the prior art and the present claims, reflected by claim 26, teach all the same process steps and thus the results obtained by applicants process must necessarily be the same as those obtained by the prior art. Therefore by thermally converting the aluminum alkoxide to alpha alumina, it must necessarily result in finely divided alpha alumina. Either 1) the applicant and the prior art have different definitions for an alpha alumina thermally converted from aluminum alkoxide, or 2) the applicant is using other process steps or parameters that are not shown in the claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Turocy whose telephone number is (571) 272-2940. The examiner can normally be reached on Monday-Friday 8:30-6:00, No 2nd Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Turocy
AU 1762

TIMOTHY MEEKS
SUPERVISORY PATENT EXAMINER